What is claimed is:

1. An optical node apparatus, comprising:

a through path coupler having at least first and second outputs, said through path coupler configured to optically connect to an input port for receiving an input optical signal and configured to provide a first through optical signal on the first output and a second through optical signal on the the second output;

a first optical filter for optically connecting to the first output port and configured to filter the first through optical signal; and

a selective connector configured for enabling selective optical connection to an output of said first optical filter,

wherein the second output port is configured to accept a second optical filter and said selective connector is configured to switch optical connection to an output of said second optical filter without any substantial disruption to an operation of said optical node apparatus.

2. The optical node apparatus of claim 1, wherein said second optical filter is an upgraded filter relative to said first optical filter.

3. The optical node apparatus of claim 1, further comprising:

a drop coupler optically connected to the input port and outputting the input optical signal to said through path coupler via a through path and also outputting the input optical signal to a drop path; and

an add coupler optically connected to receive the output of said first or second optical filter selected by said selective connector and optically connected to an add path for outputting an output optical signal to an output port.

4. The optical node apparatus of claim 3, wherein said selective connector is an optical switch.

5. The optical node apparatus of claim 3, further comprising:

a first variable optical attenuator optically placed between said first optical filter and said selective connector; and

a second variable optical attenuator optically placed between said second optical filter and said selective connector;

6. The optical node apparatus of claim 5, wherein said selective connector is an optical switch.

7. The optical node apparatus of claim 5, wherein said first and second variable optical attenuators are configured to be operated in a manner such that only one of the attenuators is disabled from attenuating at any given moment.

8. The optical node apparatus of claim 7, further comprising a combining coupler optically connected to said said first and second variable optical attenuators as inputs and optically connected to said add coupler.

9. The optical node apparatus of claim 3, wherein at least one of said first and second optical filters is a spectral blocking filter configured to permit a subset of a spectrum of the input optical signal to pass through while blocking a complementary subset of the spectrum of the input optical signal.

10. The optical node apparatus of claim 9, wherein the subset is a contiguous portion of the spectrum.

11. The optical node apparatus of claim 9, wherein the spectral blocking filter is a reconfigurable blocking filter.

12. The optical node apparatus of claim 3, wherein said drop coupler is a first drop coupler and said add coupler is a first add coupler, the optical node apparatus further comprising:

a first circulator optically placed between said first drop coupler and said through path coupler;

a second circulator optically placed between said first add coupler and said selective connector;

a second drop coupler optically connected to said second circulator; and

a second add coupler optically connected to said first circulator, wherein

said first circulator is configured to direct optical signal traffic from said first drop coupler to said through path coupler and to direct optical signal traffic from said through path coupler to said second add coupler and

said second circulator is configured to direct optical signal traffic from said selective connector to said first add coupler and to direct optical signal traffic from said second drop coupler to said selective connector.

13. A fiber optic transmission system, comprising:

a plurality of transmitters configured to transmit input signals;

a multiplexer optically connected to a fiber optic line, said multiplexer configured to multiplex signals from said plurality of transmitters to the fiber optic line;

a demultiplexer optically connected to the fiber optic line, said demultiplexer configured to demultiplex optical signals from the fiber optic line;

a plurality of receivers configured to receive the demultiplexed signals from the demultiplexer; and

one or more optical add/drop nodes of claim 3 optically placed between said multiplexer and said demultiplexer.

14. The fiber optic transmission system of claim 13, wherein at least one of said optical add/drop nodes includes a spectral blocking filter configured to permit a subset of a spectrum of the input optical signal to pass through while blocking a complementary subset of the spectrum of the input optical signal.

15. The fiber optic transmission system of claim 14, wherein the subset is a contiguous portion of the spectrum.

16. The fiber optic transmission system of claim 14, wherein the spectral blocking filter is a reconfigurable blocking filter.

17. The fiber optic transmission system of claim 13, further comprising a plurality of optical spectrum equalizers optically placed between any two optical add/drop nodes to sufficiently attenuate one or more chosen wavelengths to allow the chosen wavelengths to be reused in subsequent segments of said fiber optic transmission system.